

# Fluoride Varnish Manual For Health Professionals



South Carolina  
Department of Health and Environmental Control  
Oral Health Division  
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## **Table of Contents**

<b>Introduction</b>	<b>3</b>
<b>Supplies</b>	<b>5</b>
<b>Fluoride Varnish Ordering Information</b>	<b>6</b>
<b>Positioning of the Child</b>	<b>7</b>
<b>Application</b>	<b>8</b>
<b>Establishment of the Dental Home</b>	<b>9</b>
<b>Resources</b>	<b>10</b>
<b>Bibliography</b>	<b>12</b>

## **Introduction**

The application of fluoride varnish is an effective way to prevent and in some cases arrest tooth decay. Fluoride varnish is a thin coating of 5% sodium fluoride resin that is applied to the tooth surface. This forms a sticky layer on the tooth following application, which hardens on contact with saliva. Fluoride is then absorbed into the enamel of the tooth. It is recommended that the varnish be allowed to remain on the teeth for up to four hours for optimal absorption. According to the Federal Drug Administration, fluoride varnish falls under the category of drugs and devices that presents minimal risk and is subject to the lowest level of regulation. Fluoride varnishes have been used in Europe for more than 25 years (1).

## **Purpose**

The purpose of applying fluoride varnish is to retard, arrest, and reverse the process of tooth decay in children at risk for dental caries. Most studies have shown 25-45% reductions in the decay rate with the use of fluoride varnish. Of special note is the reduction of decay in pits and fissures, as well as on smooth surfaces of teeth. A study by Holm (2) using 225 3-year-olds resulted in a 44% caries reduction rate following semi-annual varnish applications.

## **Fluoride Varnish and Medical Providers**

Fluoride varnish provides physicians, nurse practitioners, and physician assistants with a superior method of fluoride application, especially for children under the age of six years. Fluoride varnish is applied with a small brush and hardens immediately upon contact with saliva. Minimal training is needed and no special equipment is required (1).

## **Indications**

Fluoride varnishes, professionally applied topical fluorides approved to prevent dental caries in young children, are adjuncts to oral supplementation. Fluoride varnish application is indicated for infants and children with a medium to high risk of developing cavities. Risk factors to consider when identifying a child's risk for developing tooth decay are:

- History of dental decay in mother, child and/or other family members
- High sugar/complex carbohydrate diet (For example, uses a bottle at night with liquids other than water, frequent cariogenic snacking)
- Visible plaque, white spots and/or decay
- Low socioeconomic status
- Special health care needs
- Premature/Low birth weight
- Medications: sugar-based or that cause dry mouth (3, 4, 5)

## **Contraindications**

Children with a low risk of cavity formation who consume optimally fluoridated water or children who receive routine fluoride treatments through a dental office would not need fluoride varnish applied in the medical setting.

Do not use on individuals with a known allergic reaction to colophony (colophonium).

## **Fluoride Varnish Advantages**

- Does not require special dental equipment.
- Minimal ingestion during and after treatment

- Does not require a professional dental cleaning prior to application.
- Is easy to apply.
- Dries immediately upon contact with saliva.
- Is safe and well tolerated by infants, young children, and individuals with special needs.
- Is inexpensive.
- Requires minimal training (1).
- The Dental Medicaid does not reimburse *non-dental* application of fluoride varnish at this time.

## Supplies

### **You will need to have:**

- Disposable gloves
- Gauze sponges (2 x 2)
- Fluoride varnish
- Small disposable fluoride applicator
- Paper towels or disposable bibs to place under the child's head (optional) (7)

## Fluoride Varnish Ordering Information

- **AllSolutions** (5% NaF in a natural resin) *Available in a unit-dose with an applicator.* Dentsply Professional, Phone: 1-800-989-8826
- **Cavity Shield** (5% NaF in a natural colophonium resin) *Available in a unit-dose with an applicator.* Omni Products, Phone: 1-800-445-3386
- **Durafluor** (5% NaF in a natural colophonium resin), Medicom, Phone: 1-800-435-9267
- **Duraphat** (5% NaF in a natural colophonium resin), Colgate Oral Pharmaceuticals, Phone: 1-800-225-3756
- **Fluor-Protector** (0.1% difluorosilane in a polyurethane base). Ivoclar North America-Vivadent, Phone: 1-800-327-4688
- **VarnishAmerica** (5% NaF in a natural colophonium resin) *Available in a unit-dose with an applicator,* Medical Products Laboratories, Inc. Phone: 1-800-523-0191, Ext 326

## **Positioning of the Child**

### **Infant:**

- Knee to Knee: place the child on the parent's lap with the child's head on the parent's knees and the child's legs around the parent's waist. Position yourself knee-to-knee with the parent and treat the child from behind the head.
- Examination table: place the infant on an exam table and work from behind the head.

### **Young child:**

- Place the child in a prone or sitting position and work from above the head as with an infant (7).

## **Application**

### **Open the mouth:**

- Open mouth with gentle finger pressure.

### **Dry the teeth**

- Wipe teeth with gauze sponge to remove excess saliva with a gauze sponge.
- Use fingers and sponges to isolate the dry teeth.
- Usually you can keep only a few teeth dry at time. Infants are easiest because they have only anterior teeth.

### **Fluoride Varnish in tubes:**

- Massage the fluoride tube to fully assure that the fluoride is evenly distributed within the varnish medium.
- 1 – 2 pea-sized drops (about 0.3 ml) of varnish for children with 1 – 8 teeth is sufficient and
- 2 – 3 drops (about 0.5 ml) for older children.

### **Fluoride Varnish in single unit dosage containers:**

- Stir the varnish thoroughly before applying the varnish to the teeth.

### **Time Saving Tip:**

The provider may dispense the varnish on the backside of the glove hand that is not being used for varnish application. This eliminates the time taken to reach the fluoride varnish dispenser.

### **Apply the varnish**

- Apply a thin layer of the varnish to all surfaces of the teeth. Avoid applying varnish on large open cavities where there may be pulp involvement.
- Once the varnish is applied, you need not worry about moisture (saliva) contamination. The varnish sets quickly.

### **Post-application instructions:**

- Eat soft foods for the rest of the day. Crunchy foods should be avoided for 4 hours.
- Do not brush or floss until the next morning.

### **Remember:**

- Even though the child may fuss, the varnish application is not unpleasant.
- Tell the parent that the teeth will not be white and shiny until the next day.
- Refer to a dentist in order to establish a dental home. Fluoride varnish must be applied multiple times in a year to be effective. A child with white spot lesions or active caries should definitely receive multiple applications (7).



**Establishment of the dental home** is the goal for all children by the age of one (6). If a child has not seen a dentist after initial fluoride varnish application and returns to the medical practice, reapply fluoride varnish and stress importance of obtaining a dental home and refer to patient navigator

## Resources

### **A Health Professionals Guide to Pediatric Oral Health Management**

<http://www.mchoralhealth.org/PediatricOH/index.htm>

### ***Bright Futures Oral Health Pocket Guide: Professionals***

<http://www.brightfutures.org/oralhealth/pdf/BFOHPocketGuide.pdf>

### **Dental Screening and Fluoride Varnish Application: Professionals**

Dental Health Screening and Fluoride Varnish Application Videos for the Medical Provider

<http://meded1.ahc.umn.edu/fluoridevarnish/>

### ***Healthy Mouth for Your Baby***

English

<http://www.nidcr.nih.gov/HealthInformation/OralHealthInformationIndex/ChildrensOralHealth/HealthyMouth/>

Spanish

<http://www.nidcr.nih.gov/HealthInformation/OralHealthInformationIndex/UnaBoca.htm>

**National Maternal and Child Health Oral Health Resource Center--** Women, Infants, Children and Adolescents Oral Health Information

<http://www.mchoralhealth.org/>

### **Out of the Mouths of Babes: North Carolina's Pediatric Oral Health Program for Medical Providers**

*Out of the Mouths of Babes brochure*

<http://www.mchoralhealth.org/materials/multiples/IMB%20NC%20FL%20VAR/Brochure.pdf>

*Parent Information on Fluoride Varnish*

<http://www.mchoralhealth.org/materials/multiples/IMB%20NC%20FL%20VAR/FluorideVarnishParentEd.pdf>

### **Pediatric Oral Health Topics: Professionals**

Smiles for a Lifetime—Children's Oral Health Slides for Health Professionals

<http://www.dentalcare.com/soap/slidelib/slindex.htm>

### **SCDHEC Oral Health Division**

<http://www.scdhec.net/oralhealth/>

**Website: *About Smiles***—Oral health information beginning with infants and spans the lifetime

<http://www.aboutsmiles.org/welcom.htm>

**Website: *About Smiles*** --Oral Health for children and adults with special needs

<http://www.aboutsmiles.org/special.htm>

**Website Designed for Primary Health Care Professionals** on: dental caries, periodontal diseases, oral and pharyngeal cancer, tobacco cessation

<http://oralhealth.dent.umich.edu/VODI/html/00/toc-oc.html>

***Seal Out Tooth Decay***

English

<http://www.nidcr.nih.gov/HealthInformation/OralHealthInformationIndex/Sealants/SealOutToothDecay.htm>

Spanish

<http://www.nidcr.nih.gov/HealthInformation/OralHealthInformationIndex/Sealants/Selle.htm>

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